

## Original Article

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**Epidemiologic Study on Drug Abuse among First and Second Grade High School Students in Kerman**Nouzar Nakhaee PhD<sup>\*</sup>, Hasan Ziaaddini MD<sup>\*\*</sup>,  
Ali Karimzadeh MD<sup>\*\*\*</sup><sup>\*</sup> Associate Professor of Community Medicine, School of Medicine, Kerman Neuroscience Research, Kerman, Iran.<sup>\*\*</sup> Associate Professor of Psychiatry, Kerman University of Medical Sciences, Kerman, Iran.<sup>\*\*\*</sup> General Physician, Kerman University of Medical Sciences, Kerman, Iran.**Abstract****Background:** This study investigated the epidemiology of drug abuse among high school students in Kerman.**Methods:** This was a cross-sectional study on a randomly selected sample of 652 first and second grade high school students (256 boys, 396 girls) in Kerman. They were informed that their answers would be classified and nameless before they filled questionnaires. Schools and classes were selected using stratified sampling method.**Findings:** From total 652 students participated in this study, 39.2% (256) were boys and 60.7% (396) were girls. Most of the students had information about opium (70.7% of boys and 79.8% of girls), and then alcohol (55.9% of boys and 53.9% of girls). Most offered substance to the students was alcohol (25% in boys and 12.4% in girls). The most effective encouragement for using drugs was through their friends (39% in boys, 16.9% in girls). The most used drug was alcohol among boys (11.4%) and sedative tablets among girls (12.2%). Boys preferred to use drugs in wedding ceremonies (11.3%) but girls proffered their houses (4.8%). The first reason for using drugs was socializing with unsavory friends (29.4%) and the second one was domestic problems (21.4%).**Conclusion:** The results of this study indicated dangerously increase of drug abuse among teenagers, who are the future of the society. If these results could be generalized, authorities must think of serious solutions for this rising problem.**Key words:** Substance abuse, Students, Narcotics**Page count:** 7**Tables:** 7**Figures:** 0**References:** 12**Address of Correspondence:** Hasan Ziaaddini, Associate Professor of Psychiatry, School of Medicine, Kerman University of Medical Sciences, Kerman, Iran.  
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## Introduction

Using drugs have become a part of man's life since thousands of years ago. Opium has been used for medical purposes since 3500 years ago. Morphine was discovered in 1806 and codeine in 1832. Cocaine was extracted from leaves of coca plant in 1860. Injecting morphine and heroin was expanded at the beginning of 20<sup>th</sup> century.<sup>1</sup>

Addiction to drugs is one of the saddest tragedies of modern man which threatens his life. Despite this, unfortunately tendency toward these deadly substances, especially opiate substances, is daily increasing, especially among adolescents. Drug consumption in Iran has started thousands of years ago. Considering the first commands which prohibited opium consumption in about 400 years ago, it is obvious that the effects of using drugs have attracted authorities' attention for over hundreds of years. Over the last century, expanded consumption of heroin and other narcotics, especially ecstasy and cocaine during past decades, has complicated the condition of drug abuse in our country. At this time our country has the most opiate substances users in the world.<sup>1</sup> Studies conducted by United Nations show that more than 180,000,000 people in the world are addicted to drugs. From scientific point of view, addiction is a chronic and recrudescing disease and pathologically multiple factors.<sup>2</sup>

The role of genetic, family, social-economical issues, employment, wrong cultural viewpoint toward drugs etc. could not be denied in forming this phenomenon. On the other hand, quitting addiction is complicated and difficult and is not successful most of the times. Regarding this and also considering direct and indirect costs related to addiction, including costs for fighting against smuggling, quitting addiction, curing related diseases like cardiac and pulmonary issues and AIDS, in addition to unemployment and reduction of society's active power, it's rational and economical to prevent addiction instead of curing it. Considering these factors, consumption pattern is different in various countries. Hashish is the most prevalent drug being used in America and many other countries. In North America the consumption of cannabis, heroin and cocaine (especially in the form of Crack) is becoming expanded. In the south and center of America most problems occur due to consumption of cocaine. Most used drugs in Europe are cannabis, heroin, amphetamine and hallucinatory, besides to ecstasy. In most Asian countries most

problematic drugs are cannabis and opiate substances.<sup>6,7</sup>

Consumption of addictive substances, especially alcohol, in Islamic countries is extremely different from Western countries. Because of social, economical, cultural and political reasons, using opium as an addictive substance is prevalent in Iran, Afghanistan, Egypt, Pakistan and Turkey, whether it's being planted in the country or is available legally or illegally. By the way, most used drugs in Islamic countries are some combinations of opium, hashish, alcohol and at last some psychedelic drugs. It seems that in our country combinations of opium and hashish from prohibited group and cigarette from non-prohibited group cause most of the addiction problems.<sup>3</sup>

## Methods

This is a cross sectional study on 652 first and second grade high school students (256 boys, 396 girls) in Kerman. Data were collected using a researcher made questionnaire. This study was conducted for 6 month in 2005. Schools and classes were selected by stratified sampling method. First in each class, the executive aims of the study and the technique for completing the questionnaire were explained for students. Students were assured that the content of questionnaire would remain classified hence they must answer questions honestly. Then questionnaires were distributed among students for filling without mentioning their name.

The used questionnaire was reformed Drug Use Survey Questionnaire. It contained 20 questions which included general, demographic and drug consumption information. While completing the questionnaire if students had any ambiguity, the researcher supplied necessary guidance. The collected data was analyzed using SPSS v.15 software and Chi-Square test.

## Results

Of total 652 students, 39.2% (256) were boys and 60.7% (396) were girls.

Most of the students' information, both boys and girls, was about opium and then alcoholic drinks (Table 1).

Alcoholic drinks are the most offered drug among students (Table 2).

The first one who offered drugs to students was their friend (Table 3).

**Table 1.** Absolute (relative) frequencies of students regarding their information about drugs

	Boy (n = 256)		Girl (n = 396)		Total	
	n	%	n	%	n	%
Hashish, Marijuana, Grass	37	14.5	50	12.6	87	13.3
Opium	181	70.7	316	79.8	498	76.1
Cocaine	44	17.2	62	15.7	107	16.4
LSD	9	3.5	24	6.1	34	5.2
Opium's Concentrate	91	35.5	156	39.4	247	37.8
Alcoholic Drinks	143	55.9	235	59.3	379	58
Glue, Gas, Lighter	25	9.8	29	7.3	54	8.3
Heroin	67	26.2	121	30.6	189	28.9
Ecstasy	19	7.4	31	7.8	50	7.6
Sedatives	48	18.8	129	32.6	178	27.2
Steroids	54	21.1	77	19.4	131	20

**Table 2.** Students' answers to "Have you ever been offered any of these drugs?"

	Boy (n = 256)		Girl (n = 396)		Total	
	n	%	n	%	n	%
Cocaine	2	0.8	8	2	11	1.7
Opium	22	8.6	35	8.8	57	8.9
Heroin	2	0.8	12	3	15	2.3
Opium's Concentrate	9	3.5	16	4	26	4
LSD	1	0.4	7	1.8	8	1.2
Sedatives	19	7.4	35	8.8	55	8.4
Alcoholic Drinks	64	25	49	12.4	114	17.4
Glue, Gas, Lighter	3	1.2	8	2	12	1.8
Steroids (For strengthening muscles)	22	8.6	13	3.3	35	5.4
Ecstasy	1	0.4	10	2.5	11	1.7

**Table 3.** Students' answers to "Who offered you these drugs for the first time?"

	Boy (n = 256)		Girl (n = 396)		Total	
	n	%	n	%	n	%
Friend	100	39.1	67	16.9	167	25.7
Mother or Father	8	3.1	21	5.3	29	4.4
Sister or Brother	4	1.6	9	2.3	13	2
Others	36	14	22	5.6	58	8.8
Nobody ever offered me these drugs	108	42.2	277	69.9	385	59.1

**Table 4.** Absolute (relative) frequencies of students admitted to drug consumption regarding each drug independently

	Boy (n = 256)		Girl (n = 396)		Total	
	n	%	n	%	n	%
Hashish	4	1.6	10	2.6	14	1.2
LSD	2	0.8	6	1.6	8	1.2
Opium	8	3.2	26	6.6	34	5.2
Muscle Strengthening Drugs	5	2	17	4.4	22	3.3
Opium's Concentrate	2	0.8	15	3.9	17	2.6
Alcoholic Drinks	29	11.4	35	8.9	64	9.8
Heroin	1	0.4	9	2.3	10	1.5
Sedatives	14	5.5	48	12.2	62	9.5
Other Drugs	20	7.9	49	12.4	69	

**Table 5.** Students' answers to "How many of your friends use mentioned drugs?"

	Boy (n = 256)		Girl (n = 396)		Total	
	n	%	n	%	n	%
1-2	55	21.5	79	20	134	20.5
3-4	14	5.5	23	5.8	37	5.7
More than 10	18	7	16	4	34	5.2
Uncertain	160	62.5	271	68.4	431	66.2

**Table 6.** Preferable place for using drugs among students who admitted to drug consumption

	Boy (n = 256)		Girl (n = 396)		Total	
	n	%	n	%	n	%
Never	203	79.3	354	89.3	557	85.4
At school	4	1.6	8	2	12	1.8
At home	9	3.5	19	4.8	28	3.4
In the wedding ceremony	29	11.3	14	3.6	42	6.4
On travel in the car	3	1.2	3	0.8	6	0.9
In family parties	3	1.2	14	3.5	17	6.2
At my friends' home	5	2	14	3.5	20	3.1

**Table 7.** Students' answers to "What do you think is the main reason of students' drug abuse?"

	Boy (n = 256)		Girl (n = 396)		Total	
	n	%	n	%	n	%
Curiosity	21	8.2	40	10.1	61	9.3
For fun	40	15.6	65	16.4	105	16.2
Lack of entertainment equipments	30	11.7	30	7.5	60	9.2
Mental Problems	40	15.6	55	13.8	95	14.5
Family Issues	45	17.5	95	23.9	140	21.4
The effect of unsuitable friends	80	31.2	111	28	191	29.4

Alcohol consumption among boys and sedative consumption among girls was more prevalent (Table 4).

At least 1-2 best friends of 21.5% of boys and 20% of girls had drug consumption backgrounds (Table 5).

Boys mostly preferred to use drugs at wedding ceremonies and girls preferred their own houses (Table 6).

The main reason of drug consumption among students was having unsuitable friends (Table 7).

## Discussion

In this study we assessed students' information about drugs and turned out that most of their information at first place is about opium (70.7% in boys and 79.8% in girls), second alcoholic drinks (55.9% in boys and 59.3% in girls), and third opium's concentrate (35.5% in boys and 34.9% in

girls). It's interesting that in both groups the least information was about LSDs (3.5% in boys and 6.1% in girls). In a former study by Ziaaddini et al<sup>2</sup> in 2001, frequency of information about drugs in boys and girls was respectively 83.7% and 85.5% for opium, 55.2% and 37% for alcoholic drinks, 53.2% and 33.2% for opium's concentrate, 36% and 30.3% for Sedatives, 35.7% and 14.7% for hashish, 30.1% and 27.9% for Heroin, 26.7% and 51.1% for cocaine, 18.1% and 6.7% for LSD, 16.1% and 5.7% for vaporizing substances like glue, gas, lighter, etc and 13% and 5.6% for other substances which mean during these years acknowledgment about some of the drugs have changed. Like change in information about opium in both genders and decrease in boys' information about opium's concentrate, sedatives, LSD, hashish, cocaine, glues, gas, and lighter that could mean increase in girls' information.

Because this issue has not been considered in other studies and other regions, it was not possible to compare these results with the results of other regions but after a general overview it could be concluded that boys have less information about drug abuse than girls and it makes them more vulnerable. On the other hand, most of the students' information was about opium (about 70%) that means most of the students do not have enough information about different kinds of drugs. By giving proper information to students about effects of drug abuse, they could be more protected (Table 1).

In Ziaaddini et al study,<sup>2</sup> the frequency of offered drugs to boys and girls was respectively 8.3% and 5.2% for hashish, 10.2% and 3.3% for cocaine, 26% and 12.9% for opium, 9.6% and 2.4% for Heroin, 14.3% and 4.6% for opium's concentrate, 7.3% and 2.1% for LSD, 16.8% and 8.6% for Sedatives, 39.3% and 14.5% for alcoholic drinks, 7.7% and 2.3% for glue, gas, lighter and others. Comparing that study with present results show that drug offering has decreased especially among boys, which might be due to change in social perception. However, the first one who offered drugs to students for the first time has not considered in other studies, it's mentioned in our study that friends have the most effect in this issue. The rate of offering in girls was significantly less than boys that could be a reason for less drug abuse among girls. Most offers among boys (50.9%) were from their friends. Most of the boys' friends were drug users and consumption among third grade students were less than pre-university students and all of these differences were significance. In both genders the least offering was from mother and father. This result showed that the start of drug consumption pattern which was by one of the elder member of the family in past years, have been changed.<sup>5</sup> In the former study by Ziaaddini et al,<sup>2</sup> drugs were offered to 50.9% of boys and 16.4% of girls but in our study the number of offers among boys was significantly decreased but did not change among girls. In our study the least offers were from brothers and sisters (in both genders) unlike the former study. This result might indicate the change in social cultural pattern of drug consumption start.

In our study the most frequency for drug consumption background was alcohol among

boys (11.4%) and Sedatives among girls (12.2%). In Ilhan et al study on Turkish university students the frequency of alcohol consumption was about 63.3%.<sup>4</sup> But in another study by Mohammad poor et al on high school students of Tabriz, this number was 12.7%.<sup>9</sup> The prevalence of drug abuse is different in various countries. In Wales, England, among those of age 16 to 29, the prevalence of consumption of hashish was 24%, ecstasy was 4%, and cocaine was 3%.<sup>10</sup> During the last month, among students of 8<sup>th</sup> to 11<sup>th</sup> grade of Cape town, the prevalence of consumption of alcoholic drinks was 31% and hashish was 7%. In these studies the relation of getting older with increase in drug abuse has been considered.<sup>5</sup> In the study by Ahmadi et al<sup>11</sup> on high school student in Shiraz this number was 9.6%. Also in another study by Ziaaddini et al in Kerman,<sup>8</sup> the frequency of alcohol consumption was 25.6%. Comparing these studies show that first of all consumption of alcohol and other substances in Iran is less than Western countries, and in the second place, Kerman has a bad condition in Iran. In a former study, consumption of sedatives among boys was 39.7% and among girls was 10%<sup>4</sup> which shows that boys are tending to use alcoholic drinks more over time and on the other hand consumption of Sedatives is decreasing among boys. In our study, the students were asked about their preferable place for drug consumption which was wedding ceremonies for boys and their own or their friends' houses for girls. This difference is reasonable due to social condition differences between boys and girls. Besides in the former study by Ziaaddini et al<sup>2</sup> the results was almost the same. But in other studies this issue was not considered. It can be concluded that by making healthy, secure and safe entertaining environments, we can reduce our children's addiction to various substances. At the end it could be mentioned that having unsuitable friends and family problems are the main reasons for drug consumption among students.

In conclusion, instead of all the expenses for opiate withdrawal, it's better to make a proper cultural environment as well as comfortable family life for our children in one side and provide necessary education for the society using mass media and educational institutions in the other side to enhance the quality of leisure times in the society.

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## بررسی اپیدمیولوژیک سوء مصرف مواد بین دانش آموزان سال اول و دوم دبیرستان‌های شهر کرمان

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### چکیده

هدف این بررسی اپیدمیولوژی سوء مصرف مواد در بین دانش آموزان سال اول و دوم دبیرستان‌های کرمان بود.

در این پژوهش مقطعی ۶۵۲ دانش آموز دبیرستانی سال اول و دوم (۲۵۶ پسر، ۳۹۶ دختر) شهر کرمان به صورت تصادفی انتخاب و پس از اطمینان دادن به آنها از نظر بدون نام و محرمانه بودن پرسشنامه‌ها از طریق پرسشنامه مورد بررسی قرار گرفتند. مدارس و کلاس‌های مورد نظر با استفاده از روش خوشه‌ای تصادفی انتخاب شدند.

از مجموع ۶۵۲ دانش آموز مورد مطالعه ۳۹/۲ درصد (۲۵۶) پسر و ۶۰/۷ درصد (۳۹۶) دختر بودند. بیشترین اطلاع دانش آموزان نسبت به تریاک ۷۰/۷ درصد در پسران و ۷۹/۸ درصد در دختران و سپس الکل (۵۵/۹ درصد پسران ۵۳/۹ درصد دختران) بود. بیشترین ماده تعارف شده الکل (در پسران ۲۵ درصد و در دختران ۱۲/۴ درصد) و تأثیرگذارترین فرد جهت تشویق دانش آموزان دوستان آنها (۳۹ درصد در پسران و ۱۶/۹ درصد دختران) بودند. بیشترین ماده مصرف شده در پسران الکل (۱۱/۴ درصد) و در دختران قرص‌های آرام بخش (۱۲/۲ درصد) و بیشترین محل ترجیحی مصرف مواد برای پسران مجلس عروسی (۱۱/۳ درصد) و برای دختران منزل خودشان (۴/۸ درصد) بود. مهمترین عامل مصرف مواد اعتیادزا در درجه اول دوست ناباب ۲۹/۴ درصد و پس از آن مشکلات خانوادگی (۲۱/۴ درصد) بود.

نتایج حاکی از مصرف هشدار دهنده مواد در بین این قشر نوجوان، به عنوان آینده سازان کشور، بود. در صورت قابل تعمیم بودن نتایج به سایر مناطق کشور لازم است متولیان امر به طور جدی به این امر بپردازند.

سوء مصرف مواد، دانش آموزان، مواد مخدر

مقدمه:

روش‌ها:

یافته‌ها:

نتیجه گیری:

واژگان کلیدی:

تعداد صفحات: ۷

تعداد جدول‌ها: ۷

تعداد نمودارها: -

تعداد منابع: ۱۲

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